

Translation

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

04 MAR 2005

Applicant's or agent's file reference W0804-00	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/JP2002/013553	International filing date (day/month/year) 25 December 2002 (25.12.2002)	Priority date (day/month/year) 27 September 2002 (27.09.2002)
International Patent Classification (IPC) or national classification and IPC G03G 7/00, D21H 19/42		
Applicant MITSUBISHI PAPER MILLS LIMITED		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of <u>1</u> sheets.</p>	
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>	

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Date of submission of the demand 28 November 2003 (28.11.2003)	Date of completion of this report 16 June 2004 (16.06.2004)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP2002/013553

I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
 pages 1-25, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☒ the claims:
 pages 4, 6, as originally filed
 pages _____, as amended (together with any statement under Article 19
 pages _____, filed with the demand
 pages 1-3, 5, filed with the letter of 27-5-04
- ☐ the drawings:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/JP 02/13553

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-6	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-6	NO
Industrial applicability (IA)	Claims	1-6	YES
	Claims		NO

2. Citations and explanations

- Document 1: JP 2001-83729 A (Fuji Xerox Co., Ltd.), 30 March 2001
- Document 2: JP 2002-62679 A (Mitsubishi Paper Mills Ltd.), 28 February 2002
- Document 3: JP 2002-14485 A (Ricoh Co., Ltd.), 18 January 2002

Claims 1 and 2

Document 1 (paragraph [0030]) discloses an electrophotographic transfer sheet wherein a coating layer, which is configured so that 100 parts by weight of the pigment mixture (the "soft calcium carbonate," the "kaolin" and the "organic pigment having a hollow structure" that are disclosed in document 1) comprises 20% by weight of a hollow organic pigment (the "organic pigment having a hollow structure" that is disclosed in document 1), is provided upon both surfaces of the base sheet.

In addition, document 2 (claim 4) discloses a feature wherein the hollow pigment that is included in the coating layer of the electrophotographic transfer sheet exhibits a hollowness of 50-55%, and document 3 (claim 4) discloses a feature wherein the hollow particles that are included in the coating layer of the electrophotographic

transfer sheet exhibit a hollowness of 80% or more. Therein, the hollow organic pigment that is disclosed in document 1, like the hollow pigment that is disclosed in document 2 and the hollow particles that are disclosed in document 3, is a particulate substance that is included in the coating layer of an electrophotographic transfer sheet; therefore, naturally, a person skilled in the art could have predicted that it might be possible to improve the cushioning characteristic or the like of the electrophotographic transfer sheet by configuring the hollow organic pigment that is disclosed in document 1 so that it exhibits the hollowness value that is disclosed in document 2 or 3. Furthermore, with consideration of the hollowness values that are disclosed in document 2 (claim 4) and document 3 (claim 4), it would be obvious to a person skilled in the art to adjust the hollowness of the hollow organic pigment that is disclosed in document 1 and to set the hollowness value thereof so that it falls within the numerical range that is set forth in claim 1.

Claims 3 and 4

The dry-cast calendering process that is disclosed in document 2 (paragraph [0054]), like the super calendering process that is disclosed in document 1 (paragraph [0030]), is a process for increasing the glossiness of the layer which is coated upon an electrophotographic transfer sheet; therefore, naturally, a person skilled in the art could have predicted that it might be possible to improve the glossiness of the layer which is coated upon the electrophotographic transfer sheet that is disclosed in document 1 (paragraph [0030]) by subjecting said coating layer to a dry-cast calendering process in addition to the super calendering process. Consequently, it would be obvious to a person skilled in the art to configure so that both the dry-cast calendering

process that is disclosed in document 2 (paragraph [0054]) and the super calendering process are used as the process for increasing the glossiness of the coating layer that comprises a hollow organic pigment, which is disclosed in document 1 (paragraph [0030]).

In addition, the glossiness of the coating layer is a characteristic that can be adjusted by a person skilled in the art according to the image area glossiness that is required of an electrophotographic transfer sheet or the like, as appropriate; therefore, there is not seen to be any significant technical difficulty in adjusting the glossiness of the coating layer upon the electrophotographic transfer sheet that is disclosed in document 1 and setting the glossiness of said coating layer so that it falls within the range that is set forth in claim 4.

Claim 5

With consideration of the particle diameters of the hollow pigment particles that are disclosed in document 2 (claim 4), it would be obvious to a person skilled in the art to adjust the particle diameters of the hollow organic pigment that is disclosed in document 1 and to set the particle diameter values thereof so that they fall within the numerical range that is set forth in claim 5.

Claim 6

With consideration of the average weight values that are disclosed in document 1 (paragraph [0015]) and document 2 (paragraph [0034]), it would be obvious to a person skilled in the art to adjust the average weight of the electrophotographic transfer sheet that is disclosed in document 1 and to set the average weight value thereof so that it falls within the numerical range that is set forth in claim 6.